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Market Research

ORIGINALITY WITH SHAPE AND EFFICIENCY

The solar panel production in Japan in 2001 is 173,000KW (35 % increase, compare with last year.) because strong interests for environment in Europe and America promote the export. Decreasing government subsidy has reduced the market for Residential Rooftop system in Japan. With the market reflection, PV makers stress the originalities of the panels with shape that fits nicely on every residential roof.

Sharp has the top share not only in Japan, but also in the world. Sharp developed the high efficiency solar module. It fits to roofs so that the shape of the module is triangle. Conventionally, square-shaped panel are combined. And the each series of panels create DC power and change to AC power. The difference of each series of panels' area makes less conversion efficiency. Sharp developed " the string power conditioner" that maintain the conversion efficiency even if there is the difference of each series of panels' area. With the new production, Sharp can use different shape of panels to fit any type of roofs.

Kyocera (the second share in Japan) uses different approach. Kyocera developed the system that raise the low power panel and equal to high power panels. With using this method, solar panels can be installed all over the roof. Compare with conventional system, the power output is increased by 20%.

Mitsubishi Electric approaches to make better efficient system by the combination of other electronic products. Mitsubishi's products, such as heating water system, cooking and bathroom system link to the new system to use the power more efficiently. Mitsubishi Electric collaborates with electronic industry.

Sanyo Electric differs from other electronic company and approaches to increase the conversion efficiency. Sanyo developed original single crystalline cell with amorphous layer. The system has the highest conversion efficiency but expensive comparing with the others. This system keeps the conversion efficiency even if the surface gets high temperature during summer. Sanyo also sells "HIT-190B1" better conversion efficiency products in October 2002.

All products are basically the same functions that generating solar power to current. The market is getting slow, but each company is trying to expand their market.

So, all companies tend to compete with competitive price.

In addition, large foreign PV companies, such as BP and Shell advance into Japanese market.

Maker	Type of Cell	Module conversion efficiency	Name of the production	Max. out put per module	Price per module
Sharp	Single crystalline	13.5%	NT-102BC	102 W	62,500 yen (\$521)
	Multi crystalline	12.9%	NE-098BC	98 W	50,400 yen (\$420)
Kyocera	Multi-crystalline	12.8%	R167-02	167 W	101,500 yen (\$846)
Sanyo	Single crystalline & amorphous	16.1%	HIP-190B1	190 W	127,000 yen (\$1058)
Mitsubishi	Multi-crystalline	10.9%	PV-MM094A	93.5 W	64,000 yen (\$533)

* Calculated on \$1=120 yen